DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: KIMBALL POND		Lake Area (ha):	4.17
Town: CANTERBURY	Y	Maximum depth (m):	1.2
County: Merrimack		Mean depth (m):	0.4
River Basin: Merrimack		Volume (m³):	16500
Latitude: 43°19'45"	N	Relative depth:	0.5
Longitude: 71°34'00"	W	Shore configuration:	
Elevation (ft):	476	Areal water load (m/yr):	5.68
Shore length (m):		Flushing rate (yr ⁻¹):	14.20
Watershed area (ha):	49.0	P retention coeff.:	0.64
% watershed ponded:	0.0	Lake type: natural	w/dam

BIOLOGICAL:	1 February 1991	23 July 1990
DOM. PHYTOPLANKTON (% TOTAL) #1	NO PHYTOPLANKTON	CERATIUM 90%
#2	SAMPLES COLLECTED	
#3	(TOO SHALLOW)	
PHYTOPLANKTON ABUNDANCE (cells/mL)		1665.0
CHLOROPHYLL-A (µg/L)		5.41
DOM. ZOOPLANKTON (% TOTAL) #1	NO ZOOPLANKTON	NAUPLIUS LARVA (95%)
#2	SAMPLES COLLECTED	
#3	(TOO SHALLOW)	(NO CELL COUNTS)
ROTIFERS/LITER		
MICROCRUSTACEA/LITER		
ZOOPLANKTON ABUNDANCE (#/L)		
VASCULAR PLANT ABUNDANCE		Very abundant
SECCHI DISK TRANSPARENCY (m)		1.2 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)	14.3	7.0
BACTERIA (fecal col., #/100 ml) #1		10
#2		20
#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m³): None Anoxic volume (m³): None

HEMICAL:	Lake: KIMBALL POND Town: CANTERBURY				
	1 Febru	uary 1991	23 July 1990)
DEPTH (m)	1.0		1.0		
pH (units)	6.6		7.6		
A.N.C. (Alkalinity)	21.0		19.2		
NITRATE NITROGEN	0.11		< 0.05	·	
TOTAL KJELDAHL NITROGEN	0.25		0.60		
TOTAL PHOSPHORUS	0.015		0.029		
CONDUCTIVITY (µmhos/cm)	234.6		229.9		
APPARENT COLOR (cpu)	16		69		
MAGNESIUM			2.51		
CALCIUM			9.4		
SODIUM	~		29.4		
POTASSIUM			0.20		
CHLORIDE	47		53		
SULFATE	11		3		
TN : TP	24		21		
CALCITE SATURATION INDEX			1.4		

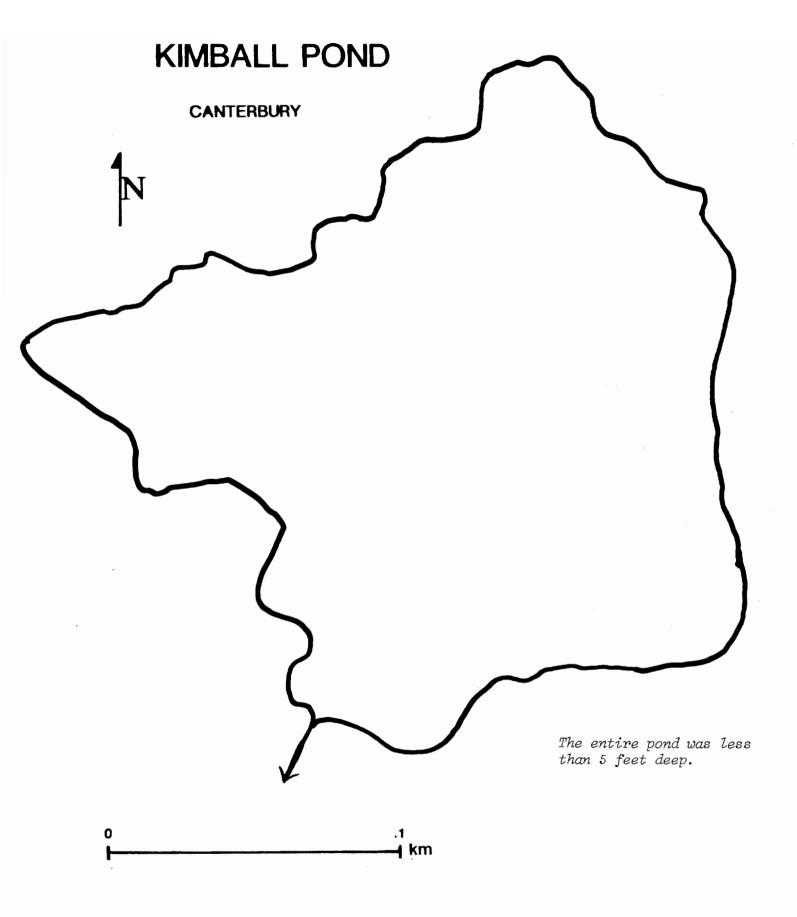
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1990

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	6	1	10	Eutro.

COMMENTS:

- The entire pond was less than 5 feet deep so no depth sounding contours are provided. However, the water level at the time of sampling was about 3 feet below the normal high water mark. It appears that the beaver dam is not being maintained.
- 2. The pond was too shallow to collect a winter plankton sample; in the summer a horizontal net tow sample was collected but no cell counts were done.
- 3. No public access; we had to portage a canoe through the weeds to reach the water (plants were too abundant to use a motor).
- 4. Chroomonas (45%) and Oocystis (15%) were the dominant genera of wholewater phytoplankton.



FIELD DATA SHEET

LAKE: KIMBALL POND

DATE: 07/23/90

TOWN: CANTERBURY

WEATHER: OVERCAST; NO WIND

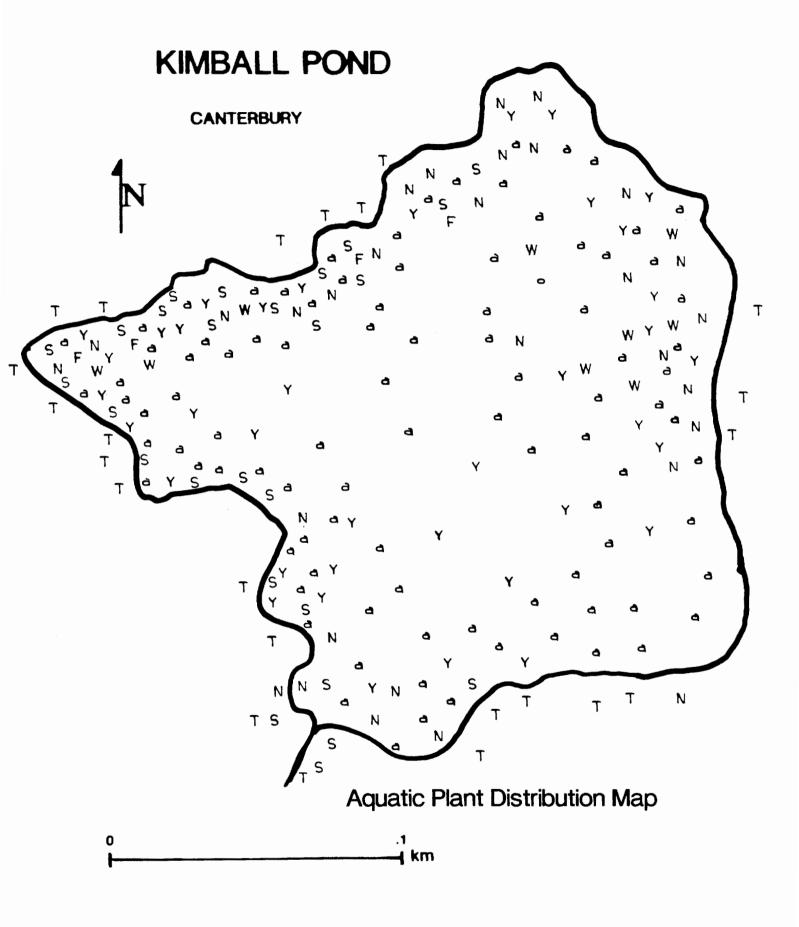
DEPTH	TEMP	*DISSOLVED	OXYGEN
(M)	(°C)	OXYGEN	SATURATION
0.1	25.1	7.0	83 %
1.0	25.0	7.0	83 %

SECCHI DISK (m): 1.2 VOB COMMENTS:

BOTTOM DEPTH (m): 1.2

TIME: 1100

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAK	E: KIMBALL POND	TOWN: CANTERBURY	DATE: 07/23/90	
Key	PLANT	NAME	ABUNDANCE	
кеу	GENERIC	COMMON		
Y	Nuphar	Yellow water lily	Common	
a	Nitella	Stonewort	Very abundant	
N	Nymphaea	White water lily	Common/Abun	
S	Sparganium	Bur reed	Scat/Common	
T	Typha	Cattail	Common	
F	Nymphoides cordatum	Floating heart	Scattered	
W	Potamogeton	Pondweed	Scattered	

	AND STATE OF THE S	4.00		
	<u> </u>			
		L		

OVERALL ABUNDANCE: Very abundant

GENERAL OBSERVATIONS:

1. Cattails surrounded much of this shallow, weedy pond; this is essentially an open water wetland.